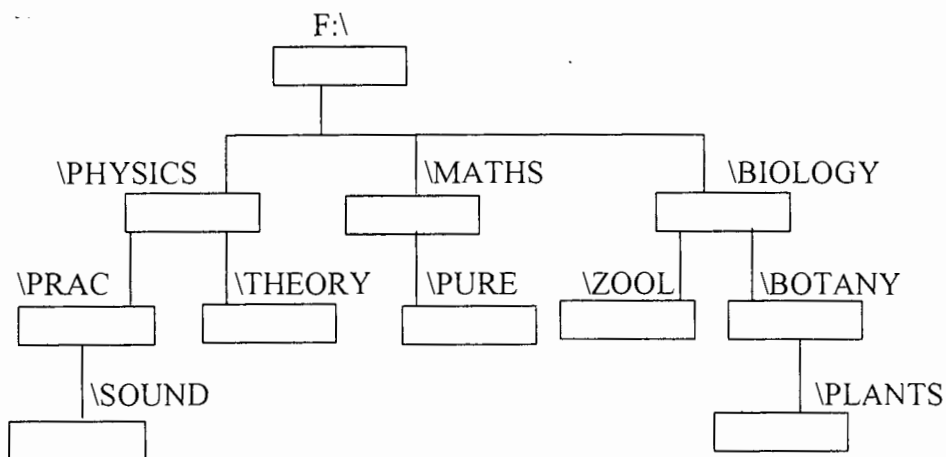


UNIVERSITY OF SWAZILAND
FINAL EXAMINATION, MAY 2011

- Title of Paper : COMPUTER SCIENCE FOUNDATION COURSE
- Course number : CSF 100
- Time allowed : Three (3) hours.
- Instructions : Answer all the questions. Choose options as written within questions.

This paper should not be opened until permission has been granted by the invigilator.

Q1(a) (5 marks). Starting from the system prompt `F:\>`, write a sequence of MSDOS commands and system prompts to create the following directory tree structure in the root of `F:\`. Assume that the root of `F:` is empty at the start.



Q1(b) (3 marks). With examples, explain the differences between the contents of a directory and the contents of a file. What are dot dot (..) directories ?

Q1(c) (3 marks). In the context of the directory tree structure of Q1(a), write the names of

- All Root directories,
- All parent directories and
- All sub directories.

Q1(d). (4 marks). Write a **single** MSDOS command along with the correct system prompt to perform each of the following tasks independently. Assume that at the start of each task, the system prompt is `F:\>`. The context is the directory structure in question 1(a). Answer **any four** of the following. Use the directory tree structure of Q1(a),

(i). Display the contents of NOTICE.TXT which is in the subdirectory \PURE.

(ii). Display the contents of the subdirectory \BOTANY.

(iii). Copy LAB2.DOC in \PHYSICS subdirectory to LAB3.DOC in \SOUND subdirectory.

(iv). Remove all the files with .TXT extension from \MATHS subdirectory.

(v). Change the name of the file THIS.DOC to THAT.DOC. Assume THIS.DOC is in \BIOLOGY subdirectory.

Q2 (a) (4 marks). Explain the steps to do the following in MS Word as implemented in the Computer Centre Lab.-

- (i). Write the names of four font styles that can be used in a document.
- (ii). Create a table which has the information of at least five or more students. The information for each student consists of columns of ID number, test1, test2, assignment, CA, EXAM and FINAL marks.

Q2(b) (6 marks). Write clear steps with example of doing the following. Answer **any two** of the following –

- (i). Position the cursor at the start of the first appearance of UNISWA using find.
- (ii). Add ($\beta \geq \alpha$) at the current cursor position.
- (iii). Add your photo at the start of a new page. Your photo is in C:\MYPHOTO.PIC

Q3(a) (5 marks). Following formulas are copied from one cell to another. Write the rules applied and the formula in the destination cell. Answer **any three** of the following.

- (i). =A3*\$C5 (is copied from B3 to D5, What is copied in D5 ?).
- (ii). =B2*C1 (is copied from A1 to D3, What is copied in D3 ?).
- (iii). =A\$3+\$C3 (is copied from D1 to D10, What is copied in D10 ?).
- (iv). =A4-C4 (is copied from F1 to F4, What is copied in F4 ?).

Q3(b) (5 marks). The contents of a clipped spreadsheet are –

1. Range A1:A5 has data values as - 8, 3, 6, 4 and 2
2. Range B1:B5 has data values as - 2, 4, 3, 1 and 0.
3. $C1 = A1*B1 - A2$,
4. $D1 = B1 + C1*2$,
5. The contents of C1:D1 are copied at C2:D4.

Draw the above spread sheet completely and clearly display the range A1:D5.-

What are the formula stored in C2:D4 ?

Q4. (4+2+4 marks). The context is the DBMS program (MS Access) as implemented in the Computer Centre Lab. A small social club in a small village wants to store simple demographic data in a database for its population which has the following information of several participating families.

1. Surname of Family Head	25 characters
2. Othernames of Family Head	30 characters
3. Day of Birth of Family Head	number (in 2 digits)
4. Month of Birth Family Head	number (in 2 digits)
5. Year of Birth Family Head	number (in 4 digits)
6. Gender of Family Head	1 character (M-Male, F-Female)
7. Size of Family	number (in 2 digits, count of family members)
8. PIN of Family Head	number (in 10 digits)

(a). Write the exact design view of a simple relational database table that can be used to store data for the above. Write the name of your table and primary key. Give reasons about your primary key choice.

(b). Write five records of your table using suitable data of your choice, ensuring that none of the following queries in Q4(c) are empty.

(c). Write SQL query (Command View) and the data sheet view of the results produced by your query for the following independently. Answer **any four** of the following -

(i). Retrieve all the data from the table so that PIN's of Family Head's are in descending order.

(ii). Retrieve all the survey data with Family Head surnames ordered in ascending order.

(iii). Retrieve PIN's and surnames of female Family Heads whose family size is 5 or less.

(iv). Retrieve PIN's , surnames and othernames of male Family Heads who are born in the month of January.

(v). Retrieve PIN's , surnames and othernames of all Family Heads who were born after the year 1950. PIN's should be in descending order.

Q5(a) (5 marks). Draw the shape produced when the following screen effecting direct action LOGO command is given. Also write the position and direction of the turtle (in degrees) after the command is executed independently. Assume that CLEAR command has already been given.

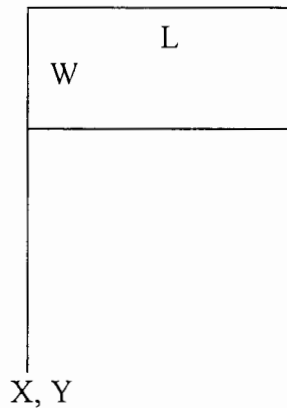
(i) REPEAT 3 (FORWARD 20 FORWARD 20 TURN 60 TURN 60)

(ii) REPEAT 3 (FORWARD 40 TURN 90)

Q5(b) (6 marks). Assuming the turtle direction to be zero, write a LOGO program named FLAG to draw a flag at X, Y point as –

0 HOWTO FLAG X, Y, L, W

The length of the flag should be L and width W. The stick (pole) size is L+W as follows.



Q5(c) (4 marks). Using the FLAG program of Q1(b), the following screen effecting direct action LOGO commands are given sequentially.

```
CLEAR
FLAG 50 50 20 10
TURN 45
FLAG 50 50 20 10
TURN -90
FLAG 50 50 20 10
```

Draw the shape drawn on the LOGO screen. What are the direction and turtle coordinates after the above is drawn ?

(End of Examination Paper)